CLAIMS

1. An automatic transmission comprising:

an input shaft that rotates based on output rotation of a drive source;

a planetary gear unit comprised of first, second, third, and fourth rotation components;

reduced rotation output means capable of output of a reduced rotation to said first rotation component from said input shaft wherein the rotation speed is reduced;

a first clutch that links said input shaft and said second rotation component in a manner capable of disengaging;

a second clutch that links said input shaft and said third rotation component in a manner capable of disengaging; and

an output unit for outputting the rotation of said fourth rotation component into the drive wheel transmitting device;

wherein at least five forward speed levels and one reverse speed level can be achieved, and wherein a direct linking level can be achieved wherein the rotations of the input shaft are output without change by said first clutch and said second clutch being engaged while at fifth speed forward at least, or higher;

and wherein said reduced rotation output means is

configured on one side in the axial direction of said planetary gear unit, and said output member is configured between said planetary gear unit and said reduced rotation output means;

and wherein said first clutch and said second clutch are configured on the other side in the axial direction of said planetary gear unit.

2. An automatic transmission according to Claim 1, wherein said reduced rotation output means comprises a reducing planetary gear that has a reduced rotation component that rotates at said reduced rotation and a third engaging component that can operate the rotation of the specified component of this reducing planetary gear.

3. An automatic transmission according to either Claim 1 or 2, wherein said third engaging component is an engaging component which engages in said first speed forward.

4. An automatic transmission according to either Claim 2 or 3, wherein said reducing planetary gear comprises an input rotation component that inputs at all times the rotation of said input shaft, a rotation fixing component that fixes the rotation, and a reduced rotation component that can reduce rotation speed based on the rotation of this input rotation component and this rotation fixing component;

and wherein said third engaging component is a third clutch that links said reduced rotation component and said

first rotation component so as to be capable of disengaging.

5. An automatic transmission according to Claim 4, wherein said third clutch is configured on the opposite side in the axial direction of said reducing planetary gear unit from said planetary gear;

and wherein said third clutch comprises an oil pressure servo that pressurizes a friction member, a drum unit that is constructed integrally with said oil pressure servo and opens toward the direction of said reducing planetary gear, and a hub unit;

and wherein the oil pressure servo of said third clutch is disposed on a boss portion extending from the case, and oil is supplied to said oil pressure servo from an oil path provided to said boss portion.

6. An automatic transmission according to either Claim 2 or 3, wherein said reducing planetary gear comprises an input rotation component that can input the rotation of said input shaft, a rotation fixing component that fixes the rotation, and a reduced rotation component that can reduce rotation speed based on the rotation of this input rotation component and this rotation fixing component;

and wherein said third engaging component is a third clutch that links said input shaft and said input rotation component so as to be capable of disengaging.

7. An automatic transmission according to Claim 6,

wherein said third clutch comprises an oil pressure servo that pressurizes a friction member, a drum unit that is constructed integrally with said oil pressure servo, and a hub unit;

and wherein said hub unit is linked with said input rotation component;

and wherein said drum unit is linked to said input shaft, and is positioned so as to open toward the direction of said reducing planetary gear.

8. An automatic transmission according to Claim 7, wherein the oil pressure servo of said third clutch is disposed on said input shaft;

and wherein oil is supplied to the oil pressure servo of said third clutch via an oil path provided within said input shaft.

9. An automatic transmission according to Claim 7, wherein the oil pressure servo of said third clutch is disposed on a boss portion extending from the case;

and wherein oil is supplied to the oil pressure servo of said third clutch via an oil path provided within said boss portion.

10. An automatic transmission according to either Claim 2 or 3, wherein said reducing planetary gear comprises an input rotation component that inputs the rotation of said input shaft, a fixing rotation component that fixes the

rotation, and a reduced rotation component that can reduce rotation speed based on the rotation of the input rotation component and the rotation fixing component;

and wherein said third engaging component is a third brake that is capable of fixing said fixing rotation component.

11. An automatic transmission according to Claim 10, wherein said third brake is configured on the opposite side in the axial direction of said reducing planetary gear unit from said planetary gear;

and wherein the oil pressure servo of said third brake is configured on the edge wall of the case.

12. An automatic transmission according to any one of the Claims 1 through 11, wherein said first clutch is a clutch that engages at said first speed reverse.

13. An automatic transmission according to Claim 12, wherein said first clutch is configured adjoined to said planetary gear unit;

and wherein said first clutch comprises a friction member and an oil pressure servo that pressurizes this friction member, and a drum unit and a hub unit that are constructed integrally with this oil pressure servo;

and wherein said drum unit is linked with said input shaft, and said hub unit is linked with said second rotation component;

and wherein said second clutch is configured on the opposite side in the axial direction of said reducing planetary gear unit from said first clutch;

and wherein said second clutch comprises a friction member and an oil pressure servo that pressurizes this friction member, and a drum unit and a hub unit that are constructed integrally with this oil pressure servo;

and wherein said drum unit is linked with said input shaft, and said hub unit is linked with said third rotation component through the outer circumference side of said first clutch.

14. An automatic transmission according to Claim 13, further comprising a first brake capable of retaining rotations of said second rotation component, and a second brake capable of retaining rotations of said third rotation component;

wherein said first brake is configured on the outer circumference side of said first clutch;

and wherein said second brake is configured on the outer circumference side of said planetary gear unit.

15. An automatic transmission according to Claim 14, wherein said first brake comprises a friction member and an oil pressure servo that pressurizes this friction member;

and wherein the oil pressure servo of said first brake is configured at the outer circumference side in the radial

direction of the oil pressure servo of said first clutch, at a position so as to overlap at least a part in the axial direction;

and wherein the friction member of said first brake is linked to the case and the hub unit of said first clutch.

16. An automatic transmission according to Claim 15, wherein said second brake comprises a friction member and an oil pressure servo that pressurizes this friction member;

and wherein the oil pressure servo of said second brake is disposed on case material extended so as to rotatably support said output member;

and wherein the friction member of said second brake is disposed on the outer circumference side of said planetary gear unit.

17. An automatic transmission according to any one of the Claims 2 through 16, wherein a transmitting member that links the reduced rotation component of said planetary gear or said third engaging component and the first rotation component of said planetary gear unit is linked together while passing through the inner circumference side of said output unit.

18. An automatic transmission according to any one of the Claims 1 through 17, further comprising a differential unit for outputting rotations to driving wheels, and a counter shaft unit for engaging said differential unit, wherein said

output member is a counter gear meshing with said counter shaft unit.

19. An automatic transmission according to any one of the Claims 1 through 18, wherein, in a speed line chart illustrating the revolutions of said first, second, third, and fourth rotation components with the vertical axis, and the gear ratio of said first, second, third, and fourth rotation components with the horizontal axis in a corresponding manner;

said first rotation component to which said reduced rotation is input is positioned at the farthest edge in the horizontal direction, with said fourth rotation component linked to said output member, said third rotation component, and said second rotation component, corresponding in that order.

20. An automatic transmission according to any one of the Claims 1 through 19, wherein said planetary gear unit is a multiple type planetary gear, comprising a first sun gear, a long pinion which meshes with said first sun gear, a short pinion which meshes with said long pinion, a carrier for rotationally supporting said long pinion and said short pinion, a second sun gear meshing with said short pinion, and a ring gear meshing with said long pinion;

wherein said first rotation component is said second sun gear capable of inputting the reduced rotation of said

reduced rotation output means;

and wherein said second rotation component is said first sun gear capable of inputting rotations of said input shaft by the engaging of said first clutch, and which is capable of being fixed by the retaining of said first brake;

and wherein said third rotation component is said carrier capable of inputting the rotations of said input shaft by the engaging of said second clutch, and which is capable of being fixed by the retaining of a second brake;

and wherein said fourth rotation component is said ring gear linked to said output member.

21. An automatic transmission according to Claim 20, wherein, in the first speed forward, reduced rotation is input to said first rotation component from said reduced rotation output means, and said second brake is retained;

and wherein, in the second speed forward, reduced rotation is input to said first rotation component from said reduced rotation output means, and said first brake is retained;

and wherein, in the third speed forward, reduced rotation is input to said first rotation component from said reduced rotation output means, and said first clutch is engaged;

and wherein, in the fourth speed forward, reduced rotation is input to said first rotation component from said

reduced rotation output means, and said second clutch is engaged;

and wherein, in the fifth speed forward, said first clutch and said second clutch are both engaged;

and wherein, in the sixth speed forward, said second clutch is engaged and said first brake is retained;

and wherein, in the first speed reverse, said first clutch is engaged and said second brake is retained;

whereby six forward speed levels and one reverse speed level can be achieved.